Practitioner's Docket No. 915-416

PATENT #3

2681

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: V. Molnar et al
Serial No.: 10/041,702 Group No.: 2681
Filed: January 4, 2002 Examiner:
For: METHOD FOR THE RESTRICTION OF A MESSAGE SERVICE

Assistant Commissioner for Patents
Washington, D.C. 20231

TRANSMITTAL OF CERTIFIED COPY

Attached please find the certified copy of the foreign application from which priority is claimed for this case:

Country:	EPO
Application Number:	PCT/EP 99/04847
Filing Date:	July 9, 1999

WARNING: **"When a document that is required by statute to be certified must be filed, a copy, including a photocopy or facsimile transmission of the certification is not acceptable." 37 C.F.R. 1.4(f) (emphasis added).**

Reg. No.: 31,391

Francis J Maguire
SIGNATURE OF PRACTITIONER
Francis J. Maguire
(type or print name of practitioner)

Tel. No.: (203) 261-1234

Customer No. 004955

Ware, Fressola, Van Der Sluys & Adolphson LLP
755 Main Street, P.O. Box 224
P.O. Address

Monroe, Connecticut 06468

NOTE: ***The claim to priority need be in no special form and may be made by the attorney or agent, if the foreign application is referred to in the oath or declaration, as required by § 1.63.***

CERTIFICATE OF MAILING (37 CFR 1.8a)

I hereby certify that this correspondence is, on the date shown below, is being deposited with the United States Postal Service on the date shown below is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the: Assistant Commissioner for Patents, Washington, D.C. 20231.

Date: May 8, 2002

Marilyn O'Connell
(Type or print name of person mailing paper)

Marilyn O'Connell
(Signature of person mailing paper)

Europäisches Patentamt

European Patent Office

Office européen des brevets

Bescheinigung

Certificate

Attestation

Die angehefteten Unterlagen stimmen mit der ursprünglich eingereichten Fassung der auf dem nächsten Blatt bezeichneten internationalen Patentanmeldung überein.

The attached documents are exact copies of the international patent application described on the following page, as originally filed.

Les documents fixés à cette attestation sont conformes à la version initialement déposée de la demande de brevet international spécifiée à la page suivante.

Den Haag, den
The Hague,
La Haye, le 24 JAN 2002

Der Präsident des Europäischen Patentamts
Im Auftrag
For the President of the European Patent Office
Le Président de l'Office européen des brevets
p.o.

Mrs. H. Fransz

Patentanmeldung Nr.
Patent application no.
Demande de brevet n° PCT/EP 99/04847

Blatt 2 der Bescheinigung
Sheet 2 of the certificate
Page 2 de l'attestation

Anmeldung Nr.:
Application no.:
Demande n°: PCT/EP 99/04847

Anmelder:
Applicant(s):
Demandeur(s):
1. NOKIA TELECOMMUNICATIONS OY - Espoo, Finland
2. MOLNAR, Valeria - Budapest, Hungary
3. OHMAN, Ismo - Hyvinkää, Finland

Bezeichnung der Erfindung:
Title of the invention:
Titre de l'invention: METHOD FOR THE RESTRICTION OF A MESSAGE SERVICE

Anmeldetag:
Date of filing:
Date de dépôt: 09 July 1999 (09.07.99)

In Anspruch genommene Priorität(en)
Priority(ies) claimed
Priorité(s) revendiquée(s)

Staat: State: Pays:	Tag: Date: Date:	Aktenzeichen: File no. Numéro de dépôt:

Benennung von Vertragsstaaten : Siehe Formblatt PCT/RO/101 (beigefügt)
Designation of contracting states : See Form PCT/RO/101 (enclosed)
Désignation d'états contractants : Voir Formulaire PCT/RO/101 (ci-joint)

Bemerkungen:
Remarks:
Remarques:

PCT REQUEST

Original (for **SUBMISSION**) - printed on 09.07.1999 02:53:34 PM

III-2	**Applicant and/or inventor**	
III-2-1	This person is:	applicant and inventor
III-2-2	Applicant for	US only
III-2-4	Name (LAST, First)	OHMAN, Ismo
III-2-5	Address:	Majavankatu 15 FIN-05460 Hyvinkää Finland
III-2-6	State of nationality	FI
III-2-7	State of residence	FI
IV-1	**Agent or common representative; or address for correspondence** The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:	agent
IV-1-1	Name (LAST, First)	PELLMANN, Hans-Bernd
IV-1-2	Address:	Tiedtke-Bühling-Kinne ~~et al.~~ & Partner GbR 21-3-0 Bavariaring 4 D-80336 München Germany
IV-1-3	Telephone No.	+49 89 544690
IV-1-4	Facsimile No.	+49 89 532611
IV-1-5	e-mail	postoffice tbk-patent.com
IV-2	**Additional agent(s)**	additional agent(s) with same address as first named agent
IV-2-1	Name(s)	TIEDTKE, Harro; BÜHLING, Gerhard; KINNE, Reinhard; GRAMS, Klaus; LINK, Annette; VOLLNHALS, Aurel; LESON, Thomas, Johannes, Alois; TRÖSCH, Hans-Ludwig; CHIVAROV, Georgi; GRILL, Matthias; KÜHN, Alexander; OSER, Andreas; BÖCKELEN, Rainer
V	**Designation of States**	
V-1	Regional Patent (other kinds of protection or treatment, if any, are specified between parentheses after the designation(s) concerned)	AP: GH GM KE LS MW SD SZ UG ZW and any other State which is a Contracting State of the Harare Protocol and of the PCT EA: AM AZ BY KG KZ MD RU TJ TM and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT EP: AT BE CH&LI CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE and any other State which is a Contracting State of the European Patent Convention and of the PCT OA: BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG and any other State which is a member State of OAPI and a Contracting State of the PCT

PCT REQUEST

WO 24000

Original (for **SUBMISSION**) - printed on 09.07.1999 02:53:34 PM

V-2	National Patent (other kinds of protection or treatment, if any, are specified between parentheses after the designation(s) concerned)	AE AL AM AT AU AZ BA BB BG BR BY CA CH&LI CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW
V-5	**Precautionary Designation Statement** In addition to the designations made under items V-1, V-2 and V-3, the applicant also makes under Rule 4.9(b) all designations which would be permitted under the PCT except any designation(s) of the State(s) indicated under item V-6 below. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit.	
V-6	**Exclusion(s) from precautionary designations**	NONE
VI	**Priority claim**	NONE
VII-1	**International Searching Authority Chosen**	European Patent Office (EPO) (ISA/EP)

		number of sheets	electronic file(s) attached
VIII	**Check list**		
VIII-1	Request	4	-
VIII-2	Description	13	-
VIII-3	Claims	4	-
VIII-4	Abstract	1	wo24000a.txt
VIII-5	Drawings	3	-
VIII-7	TOTAL	25	
	Accompanying items	paper document(s) attached	electronic file(s) attached
VIII-8	Fee calculation sheet	✓	-
VIII-16	PCT-EASY diskette	-	diskette
VIII-18	**Figure of the drawings which should accompany the abstract**	3	
VIII-19	**Language of filing of the international application**	English	
IX-1	**Signature of applicant or agent**	H. B. Pellmann	
IX-1-1	Name (LAST, First)	PELLMANN, Hans-Bernd	

FOR RECEIVING OFFICE USE ONLY

10-1	**Date of actual receipt of the purported international application**	09. 07. 99 09 JUL 1999
10-2	**Drawings:**	✓
10-2-1	Received	
10-2-2	Not received	
10-3	**Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application**	
10-4	**Date of timely receipt of the required corrections under PCT Article 11(2)**	

METHOD FOR THE RESTRICTION OF A MESSAGE SERVICE

Field of the Invention

The present invention relates to a method for restricting a message service in a communication network. The present invention is further related to a network and a terminal for a use in said network and which are capable of restricting a message service.

Related Background Art

The short message service (SMS) for the public land mobile networks (PLMN) has recently gained increasing popularity. Particularly, the most frequent users of the short message service are children and young people. However, their telephone bills are often paid by their parents, who are surely interested in a restriction of the short message service, at least in view of a usage of expensive service numbers. Thus, there arises the necessity to restrict the rights of certain users (e.g. children) of sending short messages.

Furthermore, also the blocking of receiving short messages might be important, since there may be certain senders, for example of the internet, which might intend to submit messages with malicious contents.

In addition, the operator of a network might like to have a possibility to suppress the use of the short message service, for example for roaming subscribers whose home operator does not have a charging agreement with the visited subscriber.

Document WO 99/20063 discloses a method and an apparatus for identifying a sender of a short message, with which a mobile terminated short message service could be prevented.

However, this method according to document WO 99/20063 is not able to restrict the rights for certain terminal users to send a short message, i.e. the prior art does not provide a method for the mobile originated case. Moreover, a chance for the operator to configure the usage of a message service in his own network is completely missing.

Reference GSM 03.15 of the European Telecommunications Standards Institute (ETS 300 533) discloses a technical realization of operator determined barring (ODB), wherein the barring is applied or changed in the home location register (HLR) of the corresponding home PLMN and an invocation of the barring is in the mobile originated case done in the visitor location register (VLR) and in the mobile terminated case done in the HLR. However, the ODB is tightly effected to a mobile switching center which is currently visited by a mobile station. Furthermore, since the ODB is defined in the HLR, it can only be effected for home subscribers and not for visitor subscriber.

Summary of the Invention

Therefore, it is an object of the present invention to provide a method and a network for restricting a message service in a communication network, which is free from the above mentioned drawbacks.

According to the present invention, this object can be achieved by a method for restricting a message service in a communication network, wherein at least a sender and a recipient are to be involved if a message communication takes place in said network, and each of which can be identified by a respective address; said method comprising the steps of keeping a record containing information about certain addresses with which a message communication is not allowed; receiving a request for establishing a message communication; analyzing on the basis of the information in the record whether a message communication is allowed; and preventing the transmission of a message if said message is related to an address which is not allowed according to the analyzing step.

Furthermore, the object is achieved by a network being capable of restricting a message service, comprising at least one sender and one recipient, wherein each has an address; a plurality of switching centers, wherein a terminal is always related to a visited switching center; a record in which information about the addresses being not allowed is written; an analyzing means for analyzing said record whether an address is unallowed; and means, operable to prevent the transmission of a message if said message is related to an address which is not allowed according to the analysis of the analyzing means.

Moreover, the present invention proposes a terminal for use in a network, said network comprising at least one sender and one recipient, wherein each has an address; a plurality of switching centers, wherein said terminal is always related to a visited switching center; characterized in that said terminal comprises a record in which information about the addresses being not allowed is written; an analyzing means for analyzing said record

whether an address is unallowed; and means, operable to prevent the transmission of a message if said message is related to an address which is not allowed according to the analysis of the analyzing means.

Advantageous further developments of the present invention are as set out in the respective dependent claims.

Hence, it is an advantage of the present invention that the charging and load of a network caused by a big amount of free messages can be suppressed. The present invention can be not only effected in a visited switching center, but also in an interworking switching center.

Furthermore, a specific restriction can be defined by either the operator or a subscriber of the network, whereby for example message services originating from foreign countries or, more common, from "foreign" message service centers can be restricted. Thus, the present invention provides a method for restriction which can not only applied to home subscribers but also to visitor subscribers.

In general, the method according to the present invention saves switch capacity, link capacity between a switching center of a network and a message service center of that switching center, and also the capacity of said message service center.

Preferred embodiments of the present invention are described herein below in detail by way of example with reference to the accompanying drawings.

Brief Description of the Drawings

Fig. 1 shows a schematic diagram of a network structure according to the present invention.

Fig. 2 shows the relationship between means for preventing a message transmission according to the present invention.

Fig. 3 shows a flow-chart of the method according to the present invention.

Detailed Description of the Preferred Embodiments

According to the present invention, a message service in a communication network can be restricted on the basis of addresses of elements of the network which are involved in a corresponding message communication.

Specifically, information about those addresses of network elements to be involved in a message communication which are judged by a deciding entity as being not allowed for such a message communication is written in a record. Every time when a message is to be transmitted in the network, the record is checked by an analyzing means. Consequently, if the message is related to an unallowed address, then the transmission is suitably prevented. According to the present invention, this prevention is effected at the same position in the network where the record is located.

The above outlined idea of the present invention is obviously applicable to any communication network where a message service is incorporated, where addresses are imparted to those network elements to be involved in a corresponding message communication, and where it is

possible to identify these addresses, which is according to the present invention considered as a self-evident property of addresses.

The deciding entity who judges upon the allowance of a message communication can of course be an operator of the network. In that case, this operator most likely intends to define restrictions for the whole network, e.g. restrictions for home subscribers or visitor subscribers or for all subscribers of the network, but maybe also only for a group for subscribers, as will be explained later.

On the other hand, also the subscribers of the network might want to have a specific message communication configuration for their network terminals, in order to define unallowed destinations or unallowed origins. Accordingly, an A-subscriber might prohibit the sending of messages from his terminal to certain addresses, while a B-subscriber might not permit to receive messages with his terminal from unwanted addresses.

In view of the reasons for which a message communication might be unwanted, the relevant addresses among the involved network elements for the decision upon an allowance of a message communication are the originating subscriber and the originating or terminating message service center. Thus, there is always a sender and a recipient defined in a message communication. Depending on the deciding entity and "its" viewpoint, the involved message service center can be regarded as originating or terminating, however, it is stated that for a message communication there is usually only one message service center necessary, the addresses of which message service center then serves as an originating address or

terminating address. Furthermore, a decision on the A-subscriber address and the B-subscriber address is also possible and thus included in the present invention.

As a consequence of the introducing remarks, it is apparent that the present invention is highly applicable to public land mobile networks (PLMN) and its short message service (SMS). Therefore, the further description is made by reference to this example. However, it is to be noted that this example is only intended to be illustrating but by no way limiting.

Referring now to Fig. 1, there is shown a schematic diagram of a basic structure of an example for a communication network. According to a PLMN as the above mentioned example for such a communication network, there is a mobile switching center 11, which switches incoming and outgoing calls, and particularly incoming and outgoing messages as those of the SMS. Terminals 12, 13 of the PLMN, usually mobile stations, are in case of a connection to the PLMN always related to a mobile switching center. The mobile switching center to which these terminals currently are related is referred to as a visited mobile switching center 11 (VMSC).

For the handling of the short message service, there is a short message service center 14 (SMSC) linked to the network via an interworking functionality of a mobile switching center. This mobile switching center is hereinafter called interworking mobile switching center 15 (IWMSC). However, it is mentioned that according to the direction of a message communication, this IWMSC 15 can also be regarded as a gateway mobile switching center GMSC, which denotation is not used herein for the sake of simplicity. A message to be transmitted is thus at any

time in either direction on the way between a terminal and a SMSC.

As mentioned before, at least the subscribers of the terminals 12, 13, and the message service center 14 comprise addresses A12, A13, and A14, respectively. By virtue of these addresses, it is clearly defined whether a subscriber is a home subscriber 12 or a visitor subscriber 13 (so-called "roamer") in the current PLMN and whether the SMSC used for a short message transmission is a home or foreign SMSC. As a result, the addresses A12, A13 and A14 of the network elements to be involved in a message transmission are highly suitable to judge upon the allowance of a communication with these elements.

Consequently, the following examples are conceivable.

In the mobile originated case, every message communication takes place via the respective VSMC 11. If a visitor subscriber 13 intends to use the short message service, this might be unwanted by the operator, and thus, a restriction can already be made in the VMSC 11 due to the A-subscriber address A13.

In that manner foreign networks can be barred one by one. That is, the operator can, for example, define a prevention for all subscribers with the same country code (CC) and/or the same network code (NDC). Thus, a restriction can be defined for a group of subscribers.

If in a further mobile originated case a home subscriber 12 intends to use a SMSC 14 out of the home PLMN, this might also be unwanted by the operator. However, the connection to the foreign unallowed SMSC 14 is

established via the IWMSC 15, and thus, a restriction can be made in the IWMSC 15 due to the SMSC address A14. In that manner, a SMSC barring can be valid for the whole visitor network.

This example applies of course in a very similar way to the case if a visitor subscriber intends to use "his" own SMSC.

In a mobile terminated case, all messages are received via the current VMSC 11 for either a home subscriber 12 or a visitor subscriber 13. If a foreign SMSC 14 was used to transmit a message, this might be unwanted by the operator. Hence, a restriction can be made in the VMSC 11 due to the SMSC address A14.

Further, if an operator wants to restrict the mobile terminated transmission of messages for roamers coming from a foreign PLMN, a barring would be defined for the B-subscriber address A13.

It is noted that in the mobile terminated case, also the A-subscriber address can be used for a restriction in the VMSC 11, possibly according to a different reason. Again, the subscribers can be barred in groups as explained above.

Specifically, the examples for the restriction of a subscriber-address based restriction in either mobile originated case or mobile terminated case can included such groups as all subscribers of an operator, or all subscribers having a specific type of subscription like being private subscribers, being employees of a (specific) company or all being members of a family.

According to the present invention, a message transmission is prevented at the position in the network where a respective address is detected as "unwanted". In most cases, particularly in cases of a strategic restriction of short message service use, the prevention is located in the VMSC 11 and the IWMSC 15, as can be gathered from the foregoing examples.

In contrast thereto, for example in cases of more private nature than in the above examples, it is of course conceivable that the prevention could also be done in a terminal according to the fact that also the restriction was done in the terminal.

In that case, it is further conceivable that the restriction for a terminal is not done in this terminal, but in another terminal, for example, if both terminals belong to the same subscriber but bear different addresses. The right to bar a terminal with another terminal should certainly be defined.

However, as a matter of course it is clear that the amount of restricted addresses would differ extremely from the above explained examples due to the lower resources of a terminal of a PLMN, i.e. a mobile station.

Hence, means for writing a decision information upon unallowed addresses to a record for that purpose, means for analyzing this record of information about unwanted addresses as well as the record itself are located in the VMSC 11 and the IWMSC 15, respectively. However, as mentioned above, in principal they can also be located in a terminal.

These means for performing the present invention are shown in Fig. 2, wherein reference numeral 26 denotes decision means, 27 analyzing means, 28 a record, and 29 preventing means. To avoid any additional signaling between the network elements, these means for performing the present invention are all included in the same location of the network, i.e. in the same network element. To be precise, this advantage of the present invention can be achieved that at the same network location where certain addresses are determined as to be unallowed for a message communication for which reason the decision means 26 are configured in accordance to this decision upon these certain addresses, there is a record 28 held which contains information about these certain addresses written thereto by the decision means 26 (step S26), and an analyzing means 27 to check (step S27) whether an address is unallowed. Consequently, also the preventing means 29 to which the result of the analysis of said analyzing means 27 is returned (step S29) is included with the other means in said network location.

The steps S26, S27 and S29 are shown in Fig. 2 to illustrate the relations between the different means, but will become still more apparent upon the following description of the method according to the present invention which is depicted in Fig. 3.

In a preceding step S30A, a deciding entity among the above given examples configures the decision means 26 upon a judgement on addresses by which it is determined whether they shall be allowed for a message communication or not. In a following step S26 there is information about the addresses which are not allowed written in a record 28.

When at any later time a message communication is established in the network in a step S30, then the method proceeds to a step S31, wherein the analyzing means 27 being located in the responsible network element checks all available information in the record 28. The result of this analysis is taken in a step S27 and forwarded to a step S32. Therein the result of the analysis is checked, whether an unallowed address is involved or not. If this is the case, then the transmission of the message will be prevented by the preventing means 29 in a step S29. If the answer is "no", the message will be transmitted further in a step S34 with more steps to follow.

As is described above, the present invention proposes a method for restricting a message service in a communication network, wherein at least a sender 12, 13, 14 and a recipient 12, 13, 14 are to be involved if a message communication takes place in said network, and each of which can be identified by a respective address A12, A13, A14; said method comprising the steps of keeping a record 28 containing information about certain addresses with which a message communication is not allowed; receiving a request for establishing a message communication S30; analyzing S31, S27, S32 on the basis of the information in the record whether a message communication is allowed; and preventing S29 the transmission of a message if said message is related to an address which is not allowed according to the analyzing step. The present invention further proposes a network being capable of restricting a message service, and a terminal for use in the network.

It should be understood that the above description and accompanying figures are only intended to illustrate the

present invention by way of example only. Hence, it is obvious to those skilled in the art that as technology advances the basic idea of the invention can be implemented in various ways. The invention and its embodiments are thus not restricted to the above examples but may vary within the scope of the attached claims.

Claims

1. A method for restricting a message service in a communication network, wherein

at least a sender (12, 13, 14) and a recipient (12, 13, 14) are to be involved if a message communication takes place in said network, and each of which can be identified by a respective address (A12, A13, A14); said method comprising the steps of

keeping a record (28) containing information about certain addresses with which a message communication is not allowed;

receiving a request for establishing a message communication (S30);

analyzing (S31, S27, S32) on the basis of the information in the record whether a message communication is allowed; and

preventing (S29) the transmission of a message if said message is related to an address which is not allowed according to the analyzing step.

2. A method according to claim 1, wherein one of said sender and said receiver is a message service center (14).

3. A method according to claim 1, wherein contents of said record (28) are determined in a decision step (S30A) preceding the steps of said method according to claim 1, in which decision step (S30A) it is decided whether a message communication with a certain address is allowed or not, and information of addresses being not allowed is written (S26) in said record (28).

4. A method according to claim 3, wherein said decision step (S30A) is done in a terminal of a message originating subscriber.

5. A method according to claim 3, wherein said decision step (S30A) is done in a terminal of a message terminating subscriber.

6. A method according to claim 3, wherein said decision step (S30A) is done in a visited switching center (11), to which a terminal of a subscriber being involved in said message communication is related at the time, when said message is to be transmitted.

7. A method according to claim 3, wherein said decision step (S30A) is done in an interworking switching center (15) which is to be involved, if a message communication takes place.

8. A method according to claim 1 or 2, wherein said contents of said record are subscriber specific.

9. A method according to claim 8, wherein said record is common to a group of subscribers.

10. A network being capable of restricting a message service, comprising

at least one sender (12, 13, 14) and one recipient (12, 13, 14), wherein each has an address (A12, A13, A14);

a plurality of switching centers, wherein a terminal is always related to a visited switching center (11);

a record (28) in which information about the addresses being not allowed is written;

an analyzing means (27) for analyzing with the help of said record (28) whether an address is unallowed; and

means (29), operable to prevent the transmission of a message if said message is related to an address which is not allowed according to the analysis of the analyzing means (27).

11. A network according to claim 10, wherein one of said sender and said recipient is a message service center (14).

12. A network according to claim 10, wherein said record (28), said analyzing means (27) and said preventing means (29) are located in each of said switching centers (11).

13. A network according to claim 10, further comprising at least one interworking switching center (15), wherein said record (28), said analyzing means (27) and said preventing means (29) are located in said interworking switching center (15).

14. A network according to claim 12 or 13, further comprising a decision means (26) for deciding on the permission for an address to be involved in a message communication.

15. A network according to claim 14, wherein said decision means (26) is located where the other means are located.

16. A network according to claim 10, wherein said network is adapted to perform a method according to any one of the claims 1 to 9.

17. A terminal for use in a network, said network comprising

at least one sender (12, 13, 14) and one recipient (12, 13, 14), wherein each has an address (A12, A13, A14);

a plurality of switching centers, wherein said terminal is always related to a visited switching center (11);

characterized in that said terminal comprises

a record (28) in which information about the addresses being not allowed is written;

an analyzing means (27) for analyzing with the help of said record (28) whether an address is unallowed; and

means (29), operable to prevent the transmission of a message if said message is related to an address which is not allowed according to the analysis of the analyzing means (27).

18. A terminal according to claim 17, further comprising a decision means (26) for deciding on the permission for an address to be involved in a message communication.

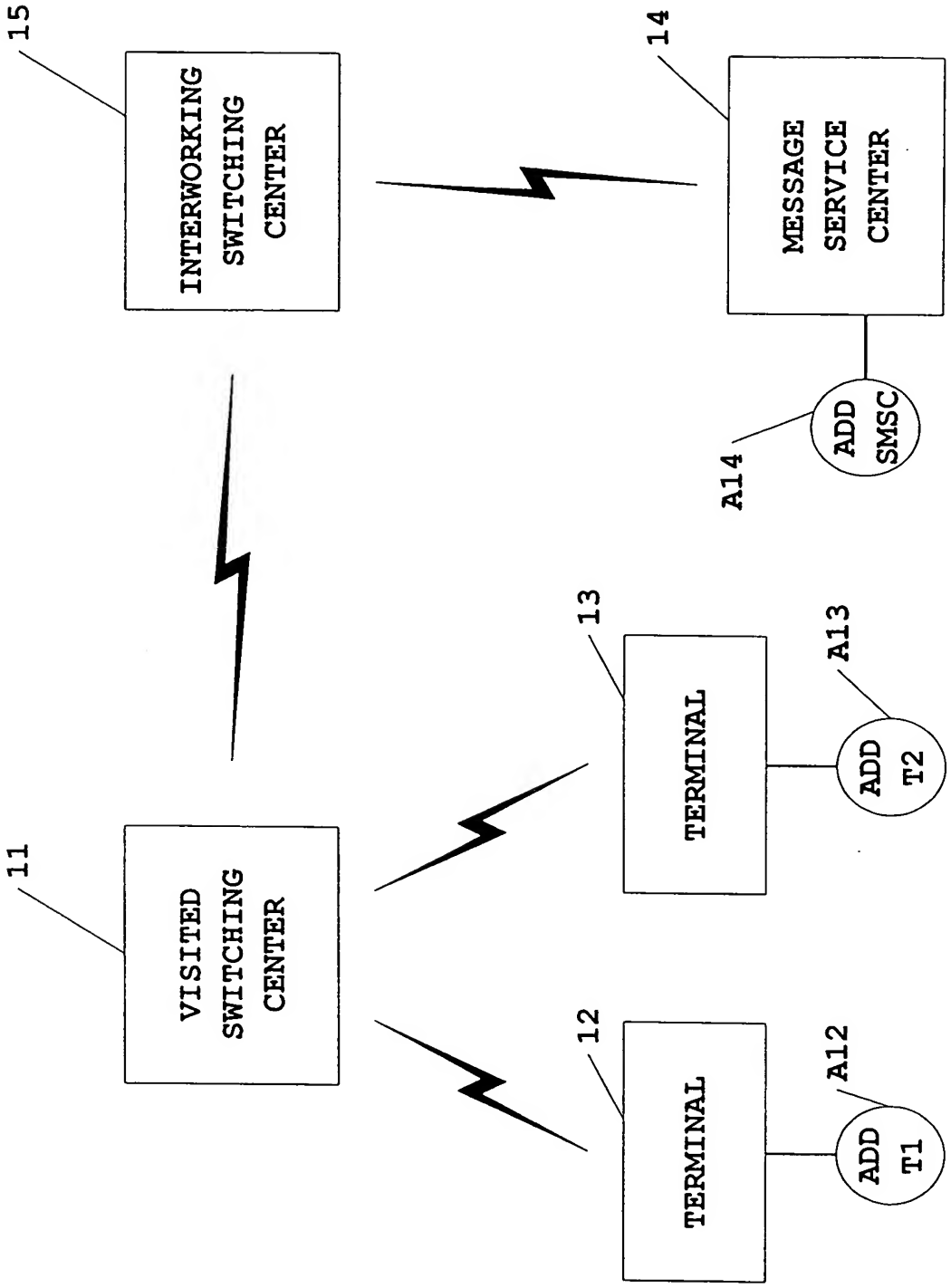
19. A terminal according to claim 18, wherein said decision means (26) is located where the other means are located.

20. A terminal according to claim 17, wherein said terminal is adapted to perform a method according to any one of the claims 1 to 9.

Abstract

The present invention proposes a method for restricting a message service in a communication network, wherein at least a sender (12, 13, 14) and a recipient (12, 13, 14) are to be involved if a message communication takes place in said network, and each of which can be identified by a respective address (A12, A13, A14); said method comprising the steps of keeping a record (28) containing information about certain addresses with which a message communication is not allowed; receiving a request for establishing a message communication (S30); analyzing (S31, S27, S32) on the basis of the information in the record whether a message communication is allowed; and preventing (S29) the transmission of a message if said message is related to an address which is not allowed according to the analyzing step. The present invention further proposes a network being capable of restricting a message service, and a terminal for use in the network. (Fig. 3)

FIG. 1


15
INTERWORKING SWITCHING CENTER
14
MESSAGE SERVICE CENTER
A14
ADD SMSC
11
VISITED SWITCHING CENTER
13
TERMINAL
A13
ADD T2
12
TERMINAL
A12
ADD T1

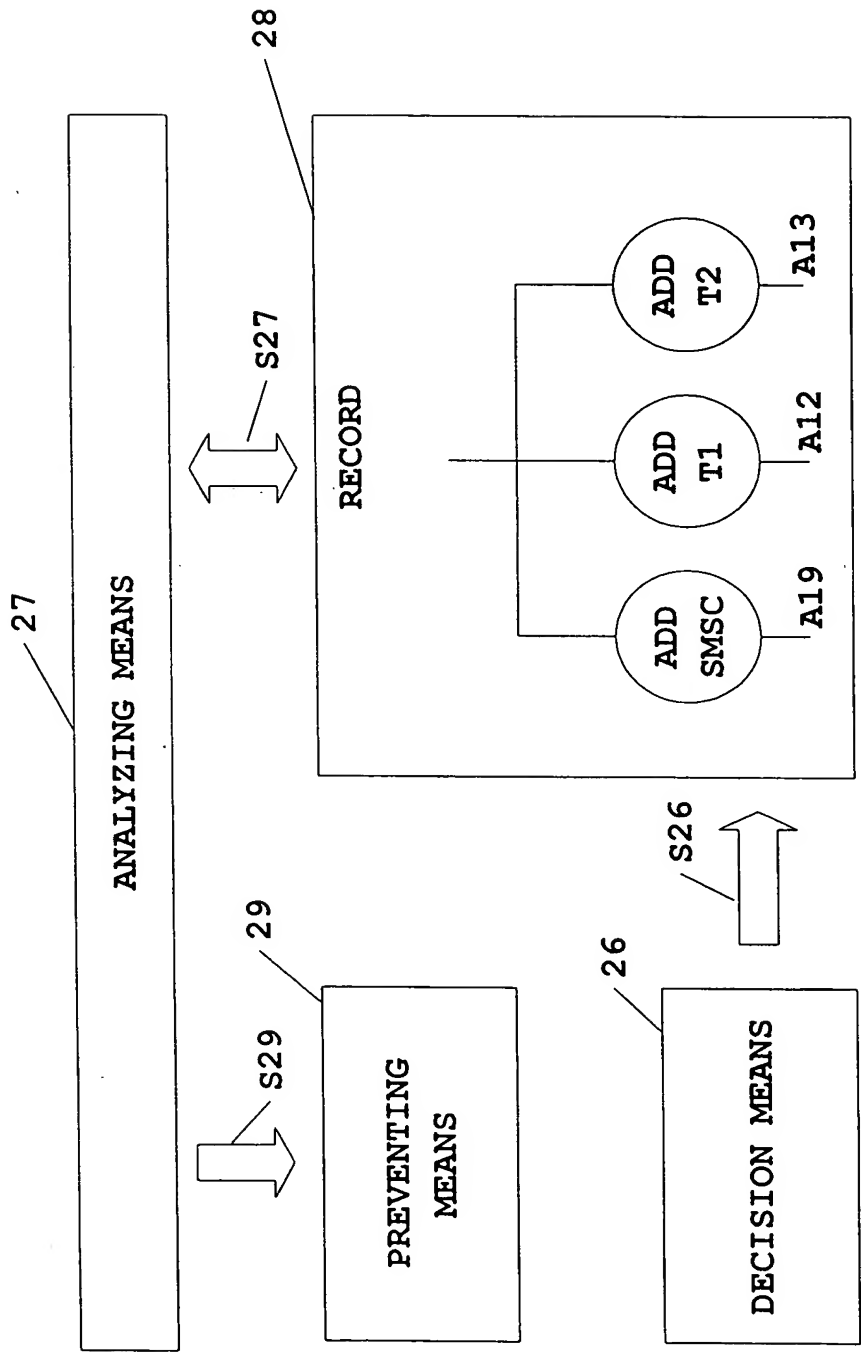

28
27
ANALYZING MEANS
RECORD
ADD T2
A13
ADD T1
A12
ADD SMSC
A19
S27
S26
29
S29
PREVENTING MEANS
26
DECISION MEANS

FIG. 2

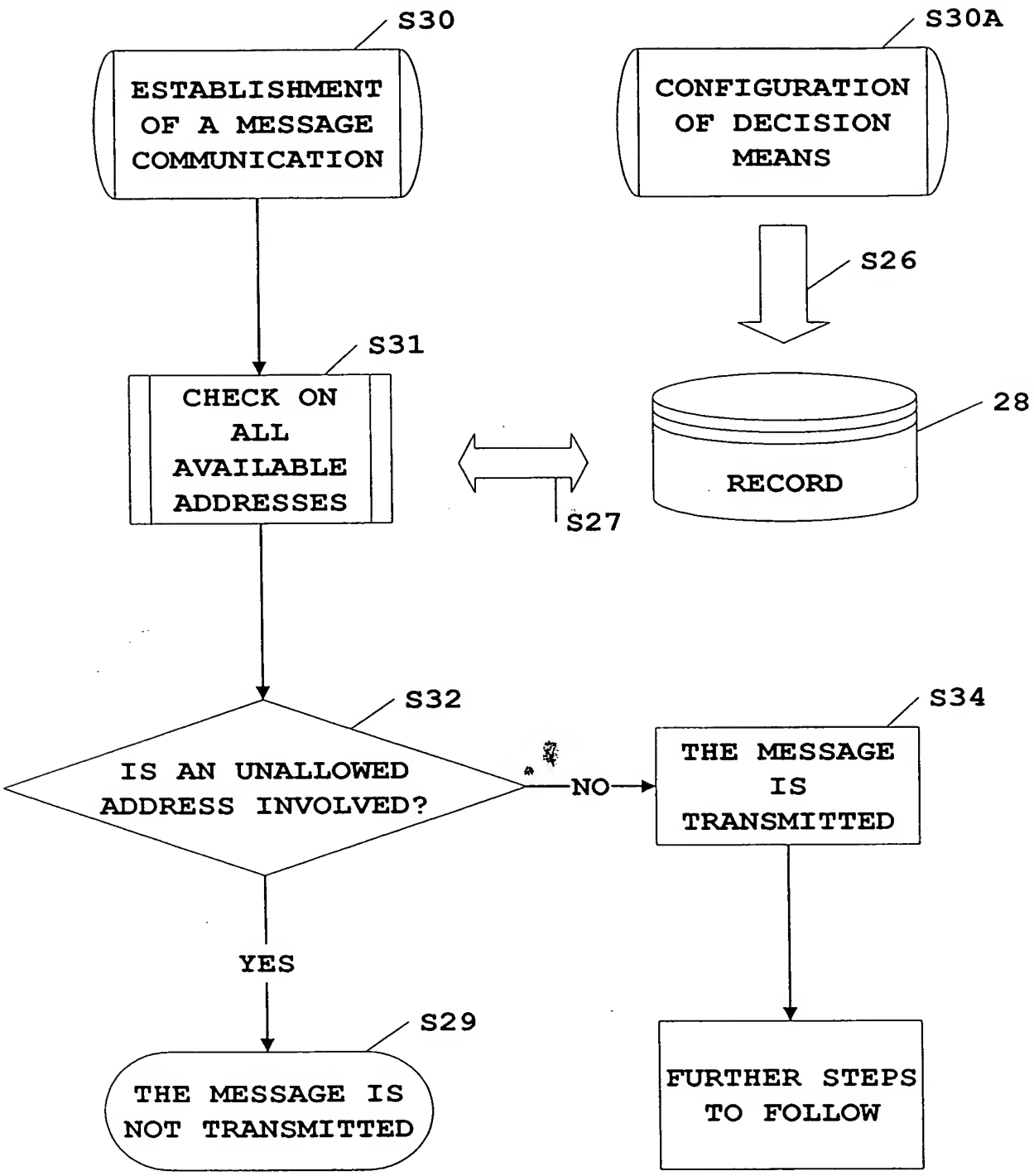

S30
ESTABLISHMENT OF A MESSAGE COMMUNICATION
S30A
CONFIGURATION OF DECISION MEANS
S26
S31
CHECK ON ALL AVAILABLE ADDRESSES
28
RECORD
S27
S32
IS AN UNALLOWED ADDRESS INVOLVED?
NO
S34
THE MESSAGE IS TRANSMITTED
YES
S29
THE MESSAGE IS NOT TRANSMITTED
FURTHER STEPS TO FOLLOW

FIG. 3